HINDUSTAN AERONAUTICS LIMITED
AIRCRAFT DIVISION
BANGALORE COMPLEX

TELEPHONE : 080- 22321585
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POST BAG NO. 1788
VIMANAPURA POST
BANGALORE – 560 017
INDIA

REF NO:- A/BA4/1421-5986/1 **DATE :- 19-05-2015**

Please upload your quotation along with relevant information for the following item in the E-procurement portal of HAL (eproc.hal-india.com):

SL NO	DESCRIPTION	QTY
01	250 KVA DG SET	01

Any queries or correspondences other than quotation should be sent to our email-id: sm_pur_ac@hal-india.com.

You are requested to quote in two bid system (Technical Bid & Price Bid).

Technical bid should contain only the compliance matrix to HAL's technical specification (placed at Annexure-B), scanned image/pdf of Demand Draft for Earnest Money Deposit, catalogues/ brochures of the product, point-wise compliance statement against all tender conditions and any relevant product information other than the pricing. Any additional relevant information to be uploaded separately and should be available during Technical Bid opening. **Technical Bid which includes pricing will summarily be rejected.**

Price/Commercial Bid should include the duly filled price schedule format attached at Annexure –A and other commercial terms and conditions. Any additional information which involves pricing like break-up, pricing for spares etc. may be provided in the additional Worksheet attached at Annexure-A1.

Bid must be submitted online through HAL's "e-Procurement system" at https://eproc.hal-india.com. Bidder shall submit both "*Technical Bid*" and "*Price Bid*" through HAL's e-Procurement Portal only. Bids submitted in any other form, such as courier/ post/ in-person/ fax/ telegram/ telex, shall not be accepted against this Tender.

Bidders are advised, in their own interest, to ensure that their bids are submitted well before the "*Due Date & Time of Bid-Submission*" of the Tender as HAL's "e-Procurement System" at https://eproc.hal-india.com will not allow submission of bids once the closing date and time of the Tender (i.e. Due Date & Time of Bid-Submission) is reached. HAL shall not be responsible if bidder is not able to submit the bid on account of failure in network / internet connection at bidder's end.

Tender Schedule:-

Sl No.	Activity	Date	Time
1	Tender closing (**Last date for submission of bids**)	18-Jun-15	23.55 hrs
2	Tender opening dates		
	a) Technical Opening	19-Jun-15	08.00 hrs
	b) Commercial/ Cost bid opening	Will be intimated later to the technically qualified bidders.	

The Commercial Bids of only those firms, whose technical bids are found to be technically acceptable, will be opened.

Earnest Money Deposit:

a) EMD for a value of Rs. 40000/- (USD 800/-) have to be submitted in the form of Demand Draft / Banker's Cheque in favour of Hindustan Aeronautics Limited, payable at Bangalore, enclosed in a cover **with tender reference and due date super scribed, and should reach the following address or the requisite amount to be Wire Transferred before Tender Closing date, by 14.00 hrs.**

Deputy General Manager [Purchase]
Hindustan Aeronautics Ltd.,
Aircraft Division [Purchase Department]
Bangalore Complex, Bangalore-560017.
PH : 080-22321585

For Wire transfer, please make use of the following bank details:
ACCOUNT NAME: HINDUSTAN AERONAUTICS LIMITED, AIRCRAFT DIVISION
ACCOUNT NO: 10918220602
IFSC CODE : SBIN0001114
BANK NAME : STATE BANK OF INDIA,HAL BRANCH
SWIFT CODE : SBININBB147

b) Bids shall be rejected in the following instances:

i) If the scanned image / PDF of the DD / Banker's Cheque or the wire transfer details for EMD is not available at the e-procurement portal during Technical Bid opening,
ii) the original instrument not received before Technical Bid opening,
iii) Non-receipt of confirmation from HAL's banker regarding wire-transfer of EMD amount.
iv) Offers not accompanied with requisite amount of EMD or EMD not submitted in the specified form.

c) EMD amount should be received in full. Any charges applicable should be borne by the bidder.

EMD needs to be submitted by participating bidder . However, the EMD remittance document, either in Indian currency or any other convertible currency of the specified amount, can be arranged by the Indian subsidiary/branch office in India of a foreign bidder which shall be submitted along with a certificate confirming the relationship of subsidiary/branch office in the bidder's offer.

d) EMD will not carry any interest for the period it is retained with HAL.
Forfeiture of EMD: EMD will be forfeited if a bidder withdraws amends, impairs and / or derogates within validity period. EMD of the successful bidder also shall be forfeited, if the successful bidder fails to honour the contract resulting from the tender.

e) **EXEMPTION:** Bidders exempted from submission of EMD as per Govt. of India directives must submit **certified copy of Govt**. of India authority for such exemption in lieu of EMD. Failure to upload the proof of eligibility for EMD exemption will result in the rejection of bid.

f) EMD of unsuccessful bidder will be returned after order acceptance by the successful bidder. However, in case of successful bidder, the EMD shall be released after the supply of the equipment or may be appropriated for security deposit or Performance Guarantee (as applicable) for the warranty period.

Conditions:-

1. **PRICE:** i) Price quoted should be net FOB / FCA, export packed / FAS Vessel with no extra charge whatsoever. The quoted price should include equipment cost, all standard and other accessories in order to meet the tendered specification. If, for special reasons, bidder prices are Ex-Works or F.O.B. plant, bidder must prepay inland transportation's. Port dues and shipment charges up to F.O.B. vessel at port of shipment and claim this amount of actual along with the price of the goods through bank. Bidder's quotation should indicate clearly the extent of such charges.

ii) Price schedule is attached at Annexure-A. Any break-up, prices of optional accessories and further price details to be indicated at format attached at Annexure-A1. Price Bid will be evaluated based on the information provided in the formats Annexure-A and Annexure-A1 only.
iii) In case Bidder has entered into Rate Contract with DGS&D, the Rate Contract, reference to be sent to HAL along with the quotation. Bidder is required to certify that prices quoted are the same as applicable to DGS&D and other Government Departments. DGS&D Rate Contract holders should state whether they are agreeable for supply at DGS&D Rate Contract Rates in the event of placement of order by us on HAL's own order form.

iv) In case an imported item is quoted by bidder, the prices quoted should be in the currency of the country of supply. HAL reserves the right to avail Custom duty exemption on imported item. To avail the exemption, HAL will provide Custom duty exemption certificate (if applicable) to the Bidder. Bidder shall submit the invoice of foreign supplier prior to release of custom duty exemption certificate by HAL. Bidder is advised to quote both the rates (with custom duty exemption and without custom duty exemption). HAL reserves the right to select any of the option for commercial evaluation and ordering.

2. Any order, resulting from the enquiry, shall be governed by the General Terms and Conditions of Contract of HAL and any party quoting against this enquiry shall be deemed to have read and understood these terms and conditions and to have quoted subject to these terms and conditions.

3. When counter terms and conditions of business have been offered by a bidder, HAL shall not be deemed to be governed by such terms and conditions unless specific written acceptance thereof has been given by HAL.

4. No condition and terms, notice of which has not been given in this enquiry by parties submitting quotations, will be considered by HAL, if put forward in subsequent correspondence, after acceptance of the orders etc.

5. **Validity of bid:** Price quoted should be net and unless otherwise specified should remain valid for our acceptance for a minimum of 180 days from the closing date of enquiry and the material offered should be kept under provisional reservation for this quotation.

6**. Taxes:** a) Applicability of the taxes (Sales Tax, Excise Duties, Octroi etc) should be explicitly indicated by the bidder in his response either in percentage or in absolute terms. In the absence of this input the offer would be considered all inclusive.
b) Excise Duty: Excise Duty will be paid only on production of sufficient documentary evidence or a certificate from the Supplier for having paid the Excise Duty at actual. The present rate and tariff details should be indicated.

c) In respect of Foreign bidders, bidders has to bear all taxes, duties and levies payable in their country and HAL will bear all statutory levies, other than withholding tax and service tax, payable in India.

Withholding Tax
i) HAL would be deducting at source applicable Income Tax as per Government of India Rules applicable at the time of making payments in respect of services rendered in India. (Generally on the amounts towards services like training, technical assistance offered by the bidder and license fees). As per the Rules, Income tax has to be borne by the recipient of the Income and relevant certificate to this effect will be issued to the bidder on deduction of such amounts, if applicable.
ii) Bidder should bear the applicable withholding income tax in India. Tax would be deducted at source by HAL as per DTAA where the bidder could claim the benefit of double taxation in their country as per the bilateral agreement between the two countries. Certificate to this effect would be issued by HAL to enable the bidder to claim the benefit under DTAA.
iii) Bidder is required to indicate the PAN No. issued by Indian Income Tax Authorities.

7. DELIVERY: All supplies should be effected within 4 – 6 weeks from the date of our confirmed P.O. However, we request you to quote earliest possible delivery.
i) Please confirm whether the item/equipment quoted/ offered is of the shelf or to be manufactured specific-to-type. If the items/equipment is manufactured specific-to-type, bidder to quote firm delivery schedule taking into consideration of the period actually required based on the complexity of the equipment.

In the event of an order, HAL reserve the right to claim towards liquidated damages on the undelivered part of the order. This clause will be strictly followed by HAL. Therefore your delivery schedule should be firm and definite.
ii) In case of Foreign Bidder, please indicate status of export permit based on the present rules/regulations of your country and normal time frame for obtaining such export permission if an order is placed on you in near future and the same should be covered within the delivery schedule indicated.

iii) If installation and commissioning of the equipment is applicable and to be done by supplier at HAL site, bidder to indicate the period required for the above job from the date of intimation of readiness of site at our premises.

iv) Bidder to note that the delivery schedule should be for:
a) Period required for the delivery/dispatch of equipment including pre-dispatch inspection if called for and
b) Period required for installation and commissioning of the subject equipment after intimation from HAL about readiness of the site.

8. **PAYMENT TERMS: -** 80% of the order value will be released within 30 days from the date of supply of the item at HAL, Aircraft Division, Bangalore. Balance 20% of the order value will be released within 30 days after successful installation and on receipt of Performance Bank Guarantee valid for the warranty period plus one month.
All the payments shall be released through RTGS / CORE / NEFT.

9. All statutory levies as applicable in India at the time of supply will be borne by HAL.

10. **Testing at Manufacturer's site:** As per Technical specification.

11. **Installation, Commissioning, Earthing and Approvals :** - As per Technical specification.

12. SAFETY CODE TO WORKMEN DURING INSTALLATION / COMMISSIONING:- You are requested to ensure all safety precaution of your personnel while installation / commissioning of equipment to prevent any accident. In case of any accident, HAL shall not be responsible for loss caused to your personnel and property. Also the contractor shall at his own expense cover up and protect from any cause for the protection of the work & materials belongs to HAL. Any damage caused must be made good by the contractor at his own expense.

13. HAL is not bound to accept the lowest or any quotations and reserves the right of accepting the whole or any part of the quotation or part of the quantity offered and you must supply the same at the rate quoted.

14. **Liquidated Damages**: In the event of an order, we reserve the right to collect a sum of 0.5% per week of delay or part thereof, subject to a maximum of 10% as our claim towards liquidated damages on the undelivered part of the order.

15. WARRANTY: DG inclusive of all systems and accessories should be warranted for 12 months from the date of commissioning against all design, material or manufacturing defects. During warranty minimum uptime of 95% shall be ensured failing which warranty period shall deem to be proportionately extended.

Regular servicing including A/B/C Check, Radiator fin descaling etc., during warranty period shall be carried out by the Vendor. However cost of consumable for A/B/C check will be borne by HAL.

All defective items / damaged parts shall be replaced free of cost by the Vendor during warranty period.

16. **Performance Bank Guarantee:** Performance Bank Guarantee should be given for 10% of the order value from a nationalized / reputed bank and valid for the period of warranty plus 01 month.
In case vendor does not agree for Performance Bank Guarantee / retention of equivalent amount, the offer would be summarily rejected.

17. **Tender Evaluation:**

a) The tender will be evaluated on the complete scope of supply as per Technical Specification, item wise.

b) If the bid is in foreign currency, foreign currency exchange rate as on date of bid opening shall be considered for comparative price statement in Commercial evaluation. Bid with lowest price conforming to the specification will be considered for placement of order.

c) In addition to price, the most advantageous bid will be ascertained on the basis of :

i) terms of Delivery ii) Payment terms iii) compliance to commercial terms and conditions.

The evaluation will be based on landed cost at the Division by including freight charges, applicable taxes, and duties to the base price quoted by the vendors.

d) If two or more bidders quote the same price, HAL reserves the right to seek revised offer from the same bidders and placing order on revised L-1 offer. If same situation prevails then HAL reserve the right to place order on any of them.

e) Conditional discounts will not be considered in evaluation of tender.

f) In case of bidders not agreeing for LD clause, the maximum LD amount / to the extent not agreed LD value, will be loaded in the Comparative Statement, to determine the successful bidder.

18. Please indicate approximate net weight of each of the item and gross weight and dimension of the package to enable HAL to determine the mode of dispatch.

19. Vendors should ensure the availability of spares and service for the offered product for a period of 10 years.

20. Please indicate in your tender, whether stores newly manufactured are offered. Where newly manufactured stores are offered and on inspection it is found that reconditioned stores or parts have been used, such stores will be rejected at the contractor's risk and expense.

21. FALL CLAUSE: The price quoted should be in no event exceed the lowest price at which you sell the stores or offer to sell stores of identical description to any persons/organization including the purchases by any department of the Govt. of India, the State Govt. or any statutory undertaking of the Govt. of India /State Govt. as the case may be during the period till the completion of the performance of the order placed and during currency of the order.
If at any time during the said period, the contractor reduces the sales price, sells or offers to
sell such stores to any person/organization including the purchaser or any department of Central Govt. or any Dept. of State Govt., or any statutory undertaking of the Central or State Govt., as the case may be at a price lower than the price chargeable under the contract, he shall forthwith notify such reduction/sale or offer to sale to the Hindustan Aeronautics Limited and the price payable under the contract for the stores supplied after the date of coming into force of such reduction or sale or offer to sale shall stand correspondingly reduced.

22. IMMUNITY TO GOVERNMENT OF INDIA: It is understood and agreed that the government of India is not a party to this agreement and has no liabilities, obligations or rights hereunder. It is expressly understood and agreed that HAL is an independent legal entity with power and authority to enter into contracts solely on its own behalf under the applicable laws of India and General Principles Contract Law. The vendor shall agree , acknowledge and understand that HAL is not an agent , representative or delegate of the government of India .It is further understood and agreed that the government of India is not and shall not be liable for any acts , omissions , commissions breaches or other wrongs arising out of the contract. Accordingly, vendor expressly waives releases and foregoes any and all actions or claims against the Government Of India arising out of this contract, not to sue the government of India as to any manner, claim, cause of action or any thing whatsoever arising out of or under this agreement.

23. ARBITRATION: All disputes or differences whatsoever arising between the parties out of or relating to the construction meaning and operating or effect of this contract or the breach thereof shall be settled by arbitration in accordance with the rules of arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties.

24. JURISDICTION: The court at Bangalore only shall have jurisdiction to deal with and decide any legal matter whatsoever arising out of the contract in the event of placement of the order.

25. Agents / Agency Commission: The seller confirms and declares to the buyer that the seller is the original manufacturer or authorized distributor / stockiest of original manufacturer or Govt. Sponsored / Designated Export Agencies (applicable in case of countries where domestic laws do not permit direct export by OEMS) of the stores referred to in this offer / contract / Purchase order and has not engaged any individual or firm, whether Indian or Foreign whatsoever, to intercede, facilitate or in any way to recommend to Buyer or any of its functionaries, whether officially or unofficially, to the award of the contract / purchase order to the Seller; nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual / firm, and paid or intended to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract / purchase order, the Seller will be liable to refund that amount to the Buyer. The Seller will also be debarred from participating in any RFQ / Tender for new projects / program with Buyer for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Contract / Purchase order either wholly or in part, without any entitlement or compensation to the Seller who shall in such event be liable to refund all payments made by the Buyer in terms of the Contract / Purchase order along with interest at the rate of 2% per annum above LIBOR (London Inter Bank Offer Rate) (for foreign vendors) and Base Rate of SBI (State Bank of India) plus 2% (for Indian vendors). The Buyer will also have the right to recover any such amount from any contracts / Purchase order concluded earlier with Buyer.

26. TERMINATION OF CONTRACT: a) In the event of unsatisfactory performance by the vendor during the contract period, or any of the information provided by the supplier is found to be untrue, or supplier is found to have attempted to influence any person involved with the contract through unethical means, the contract shall be terminated with 3 month's advance notice without any financial implication to HAL. Notwithstanding the foregoing, in cases where it is found that a supplier is engaged in unethical practices, the same shall be barred from participating in the future contracts for a period indicated in the purchase manual.
b) If there is change in the customer requirement, contract shall be terminated with one month's advance notice. The liability of HAL in this case will be agreed mutually.
c) The supplier is declared bankrupt or becomes insolvent.
d) The delivery of material is delayed due to causes of Force Majeure by more than 3 months
e) Based on the decision of the arbitration Tribunal.

27. INFLUENCING THE TENDER: After the bids are opened, Bidder shall not provide any information or send any correspondence, unless asked by HAL in writing. Providing unsolicited information, after the bids are opened, will be construed as disrupting the tender procedure and also may result in rejection of the bid.

Special Notes:

1. The quotation should be comprehensive against specification. Deviations if any, should be clearly highlighted with necessary clarification.
2. Where numerical values are required to be quoted, the comments like “YES, AGREED, WILL BE GIVEN AT THE TIME OF SUPPLY, CONFIRMED, WILL BE CONFIRMED” are not acceptable.
3. Catalogues / Datasheets should be provided for the offered equipment and all the claims in the Technical Specification compliance sheet placed at Annexure-B should be supported by documentary proofs.
4. **Deviations, if any, against the terms and conditions of RFQ to be clearly highlighted else it will be construed as the bidder is complying to all of the RFQ's terms and conditions.**

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TECHNICAL SPECIFICATION OF 250KVA DG SET, QTY: 01 NO.

Sl.No.	Description	Essential / Desirable
1 a	**PURPOSE :** The D.G. Set is intended for supplying power to the complete Hanger utilities in case of electric power failure in Aircraft Division, Bangalore Complex.	For info
2	**INSTRUCTIONS :**	
a	The Vendor should quote commercially proven model of DG Set.	Desirable
b	Comments like "YES, AGREED, WILL BE GIVEN AT THE TIME OF SUPPLY, CONFIRMED, WILL BE COMPLIED" are not acceptable where numerical values are required to be quoted.	Desirable
c	Vendor should provide Catalogue of DG set for the offered model.	Essential
d	The offer shall be ignored / disqualified in case the Vendor is Designing, Manufacturing & Installing the DG Set of equivalent rating for the first time.	Essential
e	Valid OEM Authorization certificate for Engine / Alternators/DG set to be submitted along with the offer.	Essential
f	Quotations received without above details are likely to be ignored / disqualified for consideration.	Essential
g	Vendor may visit the site of installation before submitting the quotation.	Desirable
3	**Scope of Work:** Design, manufacturing, testing, supply, erection and commissioning of DG set for prime power output of 250 KVA or higher rating at 1500 rpm, 415V±5%, 3 Ph, 0.8 pf (lag) with complete accessories in all respect including Diesel Engine, weather proof out door type Integral Acoustic Enclosure, Vibration Isolators, Alternator, AMF Control Panel with load breakers, Cabling, Earthing, internal fuel tank for minimum of **08 Hrs** running capacity at 75% load and above, suitable residential silencer, exhaust system with suitable bellows & required MS structure support, suitable battery with MS stand and civil works for earthing & MS structure etc., Diesel engine and alternator shall be closed coupled or provided with flexible coupling and mounted on a Solid MS base plate of robust construction with anti-vibration mount. Scope also includes obtaining necessary statutory approvals & certificates from the concerned authorities such as CEIG / CEA, KSPCB/CPCB etc.,	Essential
4	**Site Condition** (For information) Ambient Temperature: 9^0C – 40^0C Relative Humidity: 30% – 97% Altitude above mean sea level: 1000 mtr	For info

5	**SPECIFICATION**	
a	Rating : Minimum 250 KVA or higher	Essential
b	Power : 415 V±5%, 3 Ph, 50 Hz, 4 Wire	Essential
c	Enclosure: Weather proof outdoor type Integral Acoustic enclosure for DG Set	Essential
6	**ALTERNATOR**	
a	Alternator: 415 V±5%, 50 Hz, 3 Phase, 1500 rpm and 0.8 p.f (lag)	Essential
b	Voltage regulation: ± 1%	Desirable
c	Current Capacity: 340 (minimum)	Essential
d	The Generator shall be provided with brush less excitation system capable of supplying the excitation Current of the generator under all conditions of output from no load to full load.	Essential
e	Insulation Material : Class H	Essential
f	Voltage Regulator : AVR or latest	Essential
g	Coupling : Direct/Flexible	Desirable
h	Battery voltage and capacity compatible with the engine, complete with battery charging equipment shall be provided to energise electric starting of the equipment. Batteries shall be of lead-acid automotive type / SMF. Battery charging unit shall be part of DG control panel / AMF panel. All accessories like connecting cables, suitable MS stand, Terminal cable and terminals, etc., complete set in all respect.	Essential
i	Enclosure: Alternator enclosure shall be Screen Protected Drip Proof (SPDP) conforming to IP- 23 or higher and self air cooled type driven by the diesel engine.	Desirable
7	**DIESEL ENGINE**	
a	Speed: Approx. 1500 rpm	Essential
b	Rated Power: 290 bhp or above	Essential
c	Governor Type: Electronic	Essential
d	Method of starting: Battery	Essential
e	**FUEL CONSUMPTION:**	
i	To be indicated at 50% Load.	Desirable

ii	To be indicated at 75% Load.	Desirable
iii	To be indicated at 100% Load.	Desirable
f	Type of Cooling: Radiator,	Essential
f(i)	Aspiration:Turbocharged-Aftercooled	Desirable
g	Engine speed shall be so maintained that the frequency variation at constant load including no load shall remain within band of 2-4%of rated frequency.	Desirable
h	Shall be suitable for satisfactory operation on HSD as locally available	Desirable
i	**The following shall be part of the equipment**	
	Exhaust System with all required MS Support (without considering wall support)	Desirable
	Fuel System	Desirable
	Lubricating System	Desirable
	Combustion / Air Intake	Desirable
	Coolant System	Desirable
	Engine Electrical System	Desirable
	Exhaust Emissions (as per latest CPCB / KSPCB Norms)	Essential
	Noise Level (as per latest CPCB / KSPCB Norms)	Essential
	Silencer-Residential Type	Essential
j	**The Engine shall have the following features**	
	Speed Governing Systems	Essential
	Protection / warning for engine	Essential
	Over speed shutdown	Essential
	Low lube oil pressure warning/shutdown	Essential
	High coolant temperature warning /shutdown	Desirable
	Low coolant level warning/shutdown	Desirable
	Low Battery Voltage warning	Desirable
k	**Engine Mounted Digital Instrument Panel (Electronic)-**	
i	Features -Catalogue to be enclosed	Essential
	Event log recorder with real time clock	Desirable

	Operation hours / start / maintenance counter	Desirable
	Auto start / stop	Desirable
	Local & Remote start / stop	Essential
	Easy accessibility	Desirable
ii	**Display**	
	Voltage: Phase to neutral, total voltage	Desirable
	Lube oil pressure	Desirable
	Battery Voltage	Desirable
	Engine speed	Desirable
	Engine Run Time Hours	Desirable
	Generator set Breaker status	Desirable
	Coolant temperature	Desirable
iii	**Alarm & Protection**	
	Low oil pressure	Essential
	Over speed	Essential
	Overload, over current and earth fault	Essential
	Over Voltage & Under Voltage	Essential
	Reverse Power Protection	Desirable
	Over frequency & Under Frequency	Essential
8	**AMF CONTROL PANEL**	
a	AMF panel suitable for 250 KVA or higher rated DG Set for Automatic changeover / takeover of power supply for KEB and DG both (including all metering instruments, copper bus bars, indicator and control circuit etc).	Essential
b	The DG Set should start Automatically within 10-20 seconds after KEB Supply fails. The functioning must be totally automatic.	Desirable
c	The control panel shall be totally enclosed, dust and vermin proof, floor mounted type with suitable protection (water entry should be blocked) and aesthetically finished.	Desirable
d	The panel shall consist of the following instruments:	
i	DG/KEB supply indication should be present in the panel for all phases individually.	Essential

ii	Two individual switches (ACB of 4 pole each with adjustable current setting,50KA or higher Capacity,415 V AC) of 630 Amps or higher rating each for KEB & DG supply both	Essential
iii	Push Button switches for ON & OFF operation.	Desirable
iv	Auto/manual/test run facility with selector switch.	Desirable
v	All required instruments like AC Digital Ammeters, AC Digital Voltmeters, Digital Energy meters, Digital KW meter, Frequency meter, Over current earth fault relay, Earth Leakage Relay, PF Meter, Phase wise indicator selector switch for both voltage as well as current independently etc., should be part of AMF Panel. Other metering instrument required for panel, Buzzer for any fault, Phase preventer etc. should be in the panel.	Essential
vi	Digital DC Ammeter, Digital DC voltmeter shall be part of AMF control panel.	Desirable
vii	Switch & indicator for engine start / stop, over speed, set running / load on set, selector switch for all three phase voltage and current indicator independently etc. Panel should have tripping and resetting mechanism for all type of Fault to be handled in manual operation.	Desirable
viii	All required quantity of armoured aluminium cable of grade 1100 Volts capacity, size 3.5 core X 240 sqmm X 2 run from DG set to AMF Controls panel along with required glands, lugs, terminations needs to be supplied & works needs to be carried out	Essential
viii	All required control cable of various size as shielded 1.5 sqmm X 3 core, 2.5 sqmm X 16 core etc to be supplied and installed for successful operation of DG set. All control cable should be copper & grade 1100 Volts capacity.	Essential
ix	All the internal panels shall be provided with suitable identification labels suitable engraved. Label shall be fixed on bottom of the indication lamp etc.	Desirable
x	AMF Panel to be supplied by Vendor shall have the list of breakers as per the drawing enclosed in **Annexure-I**	Essential
9	**ACOUSTIC ENCLOSURE**	
a	Silent DG Set container with modular construction having provision to assemble and dismantle easily at site.	Desirable
b	The Diesel Generator set shall be provided with integral acoustic enclosure at the manufacturing stage itself.	Desirable
c	Offered acoustic enclosure shall have sound level ≤ 75 db (A) (or as per latest KSPCB / CPCB norms).	Essential
d	The enclosure is fabricated out of CRCA sheet of suitable thickness	Desirable
e	Enclosure shall be given anti-rust coating (inside as well outside)	Desirable
f	The doors shall be gasketed properly to avoid leakage of sound.	Desirable
g	The door handles are lockable type with lock and keys in duplicate.	Desirable
h	Specially designed attenuators are provided to control sound at air entry to the container and exit from the container.	Desirable
i	Adequate ventilation is provided to meet air requirement for combustion and heat removal.	Desirable
j	Temperature of enclosure does not exceed beyond 5-7^{0}C of ambient Temperature.	Desirable
k	Nearest building height - 36 Feet	For info

l	Enclosure should be weather proof out door type Integral Acoustic Enclosure and fabricated in such a way so that rats and insects should not enter within the enclosure.	Desirable
10	**DG TESTING AT MANUFACTURER'S SITE**	
a	The tests on DG Sets / Alternator / Exciter / AVR shall be performed at manufacture's works & Vendor shall submit test certificate.	Desirable
b	All routine test as per IS/BS codes shall be conducted on alternator, exciter and AVR	Desirable
c	Moreover the engine and alternator supplied shall be duly tested and supported by the test certificates of the respective manufacturer.	Desirable
d	All test performed certificates needs to be provide after/before supply of the DG set	Desirable
11	**INSTALLATION & COMMISSIONING**	
a	Vendor has to complete the job on turnkey basis including supply, erection, installation, testing and commissioning in all respect and prove the functionality of the DG Set.	Essential
b	Vendor should supply all the required items for Installation and commissioning work of DG set, irrespective of the item which is not mentioned in the specification.	Essential
c	Any site preparation work including all required materials the fuel pump & associated piping, exhaust piping with residential silencer & required MS support, earthing, for successful installation & commissioning of DG Set shall be carried out by the vendor.	Essential
d	DG Set to be installed in open space– It is vendor scope to make all necessary arrangement for putting residential silencer and removal of exhaust air from Acoustic to outside. Also no Rat, water, insect etc should enter to the enclosure.	Desirable
e	First fill of lube oils, coolants, grease etc., for carrying out commissioning of DG Set shall be supplied by vendor free of cost.	Essential
f	Material handling equipment for shifting, fixing, movement etc., shall be arranged by Vendor without additional cost.	Desirable
g	Vendor shall be responsible for taking suitable safety measures for their service engineers / technicians / labour etc., while carrying out installation and commissioning of the equipment at HAL site.	Essential
h	Vendor shall be responsible for any damage to HAL property / accident to manpower caused during installation & commissioning. Vendor shall bear the all applicable penalties.	Desirable
i	Proposed plan layout of the DG set is enclosed in **Annexure-II.**	For info
12	**EARTHING**	
a	Earthing work should be carried out by the Vendor as per Indian Electricity Rules including all required materials and necessary civil works including excavation & concreting etc.,	Essential
b	Suitable body earthing with GI Plate with required strips for DG Set & AMF Panel to be provided (02 X 01 no. of DG Set + 2 X 01 no. of AMF panel).	Essential
c	Suitable neutral earthing with Copper Plate and copper Strip to be provided DG set (02 X 01 no. of DG Set)	Essential
d	Earth terminals shall be vibration proof with all hardware of non-ferrous or galvanised / plated and passivated in case of ferrous hardware.	Desirable
13	**STATUTORY APPROVALS**	
a	All applicable statutory approvals to be obtained by the Vendor. All Statutory Fees shall be borne by the Vendor however required document from HAL will be provided as when asked for.	Essential

b	Obtaining statutory approval including preparation of necessary drawing and documentation.	Essential
c	Liaison and obtaining CEA / CEIG approval and any other (required for making DG Set operational) for 250 KVA or higher rated DG set.	Essential
d	All required document approvals obtained for CPCB/KSPCB/authorised agency / environmental related approvals / authority and legal (If any) is to be provided by the vendor.	Essential
14	**SAFETY ACCESSORIES** The machine must be provided with all safety features necessary to protect the machine, control and the operator while in operation from all possible damage / injury.	Desirable
a	1.1 KV Class-1 approved tested quality rubber mat of 6mm thick and 900mm wide and 1800mm long, installed in front of the power distribution boards and other DBs.	Desirable
b	Shock treatment chart in Hindi, English & Kannada.	Desirable
c	Danger Boards in Hindi, English & Kannada.	Desirable
d	440V Class enameled danger board of 150 x 150mm size.	Desirable
e	4.5 Kg Class CO2 type portable fire extinguisher - Qty: 02 Nos.	Desirable
f	First aid box complete with all standard first aid materials.	Desirable
g	Set of two sand / fire buckets with MS stand.	Desirable
15	**DOCUMENTATION**	
	Three (03) sets of the following documents in English shall be supplied	
a	Operation Manual	Essential
b	Maintenance and Service Manual	Essential
c	Electrical wiring diagrams	Essential
i	Single line diagram showing rating of components, metering and protection for DG panel / PLC panel / Distribution boards etc.,	Essential
ii	Earthing layout showing connections to DG Panels	Essential
iii	Wiring Diagram	Essential
d	Write-up on control philosophy for complete emergency electrical system containing starting and stopping sequence, interlocks, metering, annunciation etc.	Desirable
i	Electrical layout drawing showing location of equipment, cable routing, bus duct connections, water and fuel piping arrangement with fuel tank for DG Set, exhaust system etc. – Plan & Elevation drawing including sectional details	Essential
ii	Preventive maintenance check list, trouble shooting charts and guidelines.	Essential
e	Spare parts list	Desirable

f	Vendor shall submit and obtain prior approval from HAL for one set of following documents after placement of order a) General arrangement with required dimensions and clearances b) Foundation drawing and details of Civil work required c) Weight of the equipment d) External connections & fixing arrangement e) Space required between various portions of equipment	Essential
16	**SUPPORT SERVICES** Throughout design, implementation, field installation the Vendor shall provide consulting assistance, as required by the HAL for site preparation, field installation and other areas where technical support may be required.	Desirable
17	**TECHNICAL SUPPORT** Consultation with Vendor's technical support personnel and trained field service personnel shall be readily available on a short-term/long-term basis to assist HAL in maintaining, expanding and enhancing the installed setup.	Desirable
18	**TRAINING:** Vendor should provide required training to HAL personnel free of cost in the following areas at HAL site / Class room :- DG set Operation, Mechanical Maintenance & Electrical and Control System Maintenance	
19	**WARRANTY**	
a	Entire DG set inclusive of all Systems/Accessories shall be warranted for a period of minimum 12 months from the date of installation & Commissioning against all design, material or manufacturing defects.	Essential
b	Regular servicing including A/B/C Check, Radiator fin descaling etc., during warranty period shall be carried out by the Vendor. However cost of consumable for A/B/C check will be borne by HAL.	Desirable
c	All defective items / damaged parts shall be replaced free of cost by the Vendor during warranty period.	Essential
20	**ANNUAL MAINTENANCE CONTRACT**	
a	Vendor should quote for Annual Maintenance Contract for a period of 2 years after the expiry of warranty period including A/B/C check and servicing of radiator fin descaling, charge air cooler cleaning, preventive maintenance etc. However consumables required will be provided by HAL.	Desirable
b	The condition for the annual maintenance contract will be as follows:-	Desirable
i	Uptime of the equipment on monthly basis to be maintained to 95%.	Desirable
ii	Breakdown calls shall be attended within 48 hours from the breakdown time reported.	Desirable
iii	Preventive maintenance shall be carried out on regular basis.	Desirable

21	**GENERAL:** Vendor should quote separately for		
a	DG Set with internal Day Tank, Exhaust system & weather proof out door type Integral Acoustic Enclosure,Exhaust system (with MS angle, additional suitable exhaust bellows for horizontal piping and support etc), Silencer etc.		Essential
b	Accessories like AMF Panel including cabling and termination		Essential
c	Earthing work as per technical specification Sl. No.12		Essential
d	Installation & Commissioning of the DG Set.		Essential
e	Obtaining necessary statutory approvals, drawings, liaisoning work for successful operation of DG Set.		Essential
f	**Annual Maintenance Contract: (AMC)** Vendor to quote for AMC as per Sl. No. 20 of technical specification		Desirable
22	**ADDITIONAL LIST OF DOCUMENTS TO BE SUBMITTED ALONG WITH THE OFFER**		
a	Technical catalogue of the offered model along with data sheet		Essential
b	Drawing of AMF Panel along with single line diagram		Essential
c	Detailed drawing of foundation indicating necessary details		Desirable
d	Previous experience of installed capacity of equivalent or higher rating with necessary details such as Customer Name, model with capacity, purchase order no. etc.,		Essential
23	**MAKE OF THE ITEMS**		
a	All items used in the DG set/AMF Panel/Cabling etc., should be standard/Reputed make only		Desirable
b	List of Preferred Makes is as given below.		
1	DIESEL ENGINE	CUMMINS / CATERPILLAR / MTU / MITSUBISHI / PERKINS / KIRLOSKAR / VOLVO / VOLVO PENTA	Desirable
2	Alternator	Leroysomer / Stamford / Crompton / or Equivalent	Desirable
3	AVM PADS (Anti Vibration Mount)	DUNLOP / GERB / RESISTOFLEX / POLYBOND or as per DG OEM	Desirable
4	MS PIPES FOR EXHAUST/WATER/FUEL PIPING (as per IS Standards)	JINDAL / TATA / SAIL	Desirable

5	VALVES	SANT / RAMA / AUDCO / KIRLOSKAR	Desirable
6	BATTERIES (Lead Acid)	AMCO / EXIDE / AMARON / AMAR RAJA	Desirable
7	POWER CONTROL WIRES	HAVELL / FINOLEX / L & T / COBRA / INDO ASIAN / POLYCAB / KEI	Desirable
8	BUTTERFLY VALVES, STRAINER, NRV	C&R / SANT / LEADER	Desirable
	DG PANELS, DG AUXILIARY PANEL AND RELATED ITEMS :		
9	ACB / MCCB / MCB	L & T / GE POWER / SIEMENS / ABB /SCHNEIDER / C&S	Desirable
10	HRC FUSES	L & T / SIEMENS / GE POWER / ABB /C&S / SCHNEIDER	Desirable
11	BUS DUCT COPPER	ADVANCE PANEL & SWITCHGEAR PVT.LTD. / TRICOLITE / C&S / ADLEC.	Desirable
12	AMMETER, VOLTMETER	AE / MECO / UNIVERSAL / IMP / DIP	Desirable
13	SELECTOR SWITCH, PUSH BUTTON SWITCH / EMERGENCY SWITCH ETC.,	KAY CEE / CONTROL & SWITCH GEARS / L&T / GE POWER CONTROL / SIEMENS /BCH. / ABB / HAVELLS	Desirable
14	LED INDICATION LAMPS	TECHNIK / VAISHNO / C&S / EASUN / KAY CEE / SIEMENS/ L&T	Desirable
15	CT'S	AE / UNIVERSAL / KAYCEE /C&S / L&T / MECO.	Desirable
16	STARTERS	SIEMENS / L&T / CUTLER HAMMER / GE POWER / ABB / C&S / SCHNEIDER	Desirable
17	SINGLE PHASING PREVENTOR / OVER LOAD PROTECTION UNIT	L&T / GE POWER / SIEMENS / MINILEC /ABB / SCHNEIDER	Desirable
18	RELAYS	L&T / AREVA / ABB / SIEMENS	Desirable
19	POWER CABLE	UNIVERSAL / GEMCAB / HAVELLS / PRIMECAB / GLOSTER / POLYCAB / KEI	Desirable
20	CONTACTORS	L&T / GE POWER / BCH / SIEMENS / ABB/ TC / C&S / SCHNEIDER	Desirable
21	KWH, PF, FREQUENCY METER	AE / HAVELLS / L&T /AREVA / SECURE / GENUS	Desirable
22	PUSH BUTTONS	L&T / SIEMENS / BCH / CON CORD / GE/C&S	Desirable
23	TIMERS & TIME SWITCH	L&T/ BCH / MDS / INDO ASIAN / SCHNEIDER / SIEMENS / GE POWER CONTROL	Desirable

24	DIGITAL METERS	ENERCON / NEPTUNE / AE / L&T	Desirable
25	ENERGY METER / MULTI DATA METERS	BHEL / L & T / ENERCON / HPL / SCHNEIDER ELECTRIC / EASUN	Desirable
26	INTELLIGENT MULTIFUNCTION DIGITAL METER	ENERCON / NEPTUNE / AE / L&T	Desirable
27	PLC	ROCKWELL AUTOMATION / L&T /SIEMENS / ABB / FANUC	Desirable
28	UPS SYSTEM FOR PLC	APC / DUBAS / EMERSON / WIPRO / DB POWER	Desirable
29	UPS BATTERIES	EXIDE / PANASONIC / AMCO / AMARON	Desirable

Note: The specification drawn are generic in nature.

Instructions for submission of Bids at HAL's e-procurement portal

1. The Tender (bids) should be submitted through e-Procurement Portal of Hindustan Aeronautics Limited (https://eproc.hal-india.com or link to e-Procurement portal through www.hal-india.com). Contractors need to get registered with HAL e-Procurement portal to submit their bids online. Bidders should have Class III Digital Signature Certificate (DSC) and should also register with HAL's e-procurement Portal, for submission of Bids.

2. Class III Digital Signature Certificate (DSC) with organization name is a mandatory requirement for suppliers to participate in e-Procurement activities. Class III DSC may be obtained from any of the Certifying Authority(CA's) (Visit- http://cca.gov.in for further details):

Suppliers/ Contractors have to obtain Class III DSC from any of the CA's and then register in the HAL e-Procurement portal for participation in e-tender.
For e-Tender related queries & difficulty in document uploading, you may contact at the following e-mail id /Phone Nos.
ephelpdesk@hal-india.com / Ph. Nos. - +91 80 40482133, 22323697/98
Alternatively, you may also contact: Deputy Manager (Purchase) Tel: +91-80- 22321585.
e-mail: sm_pur_ac@hal-india.com

3. Bidders are also requested to go through instructions/ user manual hosted in HAL e-procurement portal for submission of bids.

4. The bids should be submitted in TWO BID System [Techno-Commercial (Un-priced) bid and Price Bid] as per the instructions given at RFQ document.
(Note: Each document size (attachment size of document) for uploading in e-procurement portal is restricted to 5MB. If the size of the document is more than 5 MB, you are requested to Zip /split the file and submit as applicable.)

5.Offer submitted through e-procurement portal will only be considered.

6. Submission of Tender Document Fee & EMD (Earnest Money Deposit), if applicable: Strictly as per the instructions given in RFQ document.

7. The tender (bids) should be submitted online at website https://eproc.hal-india.com only on or before the due date and time specified in the tender. The server date and time as appearing on the HAL e-Procurement portal (https://eproc.hal-india.com) will only be considered for the cut-off date and time for receipt of tenders.

8. HAL will not be responsible for the cost incurred in preparation & submission of bids including the cost towards obtaining digital certificate.

9. Bidders shall be required to arrange all resources including Digital Signature Certificate (DSC) and Internet connections at their own cost for participating in online tenders at https://eproc.hal-india.com. HAL shall not be responsible for any delays whatsoever in receiving as well submitting offer (online), including connectivity issues.

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